



3743

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Dussinger et al.

Filing Date: 05/09/2001 Examiner: Not yet known

Serial No.: 09/852,322 Group: Not yet known

For: INTEGRATED CIRCUIT HEAT PIPE HEAT  
SPREADER WITH THROUGH MOUNTING HOLES

CERTIFICATE UNDER 37 CFR 1.8(a)  
I, SAMUEL W. APICELLI, REGISTRATION NO. 36,427, HEREBY CERTIFY  
THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE  
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PATENTS, WASHINGTON, D.C. 20231

ON

SAMUEL W. APICELLI

TRANSMITTAL LETTER

Assistant Commissioner for Patents  
Washington, D.C. 20231  
BOX DD

Sir:

Please find enclosed for filing:

- ☒ Information Disclosure Statement, PTO-1449 and references.
- ☒ Should any fees be incurred please debit Deposit Account No. 04-1679.  
This Transmittal Letter is submitted in duplicate.
- ☒ Other: Return Postcard

H. Hiron

#6

2/22/2002

Date: 10/18/01

Respectfully submitted,

Samuel W. Apicelli  
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Docket No.: H1799-00071



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ON

*October 18, 2001*  
*Samuel W. Apicelli*  
SAMUEL W. APICELLI

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231  
BOX DD

RECEIVED

JAN 15 2002  
TECHNOLOGY CENTER R3700

Sir:

Pursuant to the Duty of Disclosure set forth in 37 CFR 1.56, the materials listed on the enclosed form PTO-1449 are hereby brought to the attention of the Examiner. A copy of each is enclosed.

French Patent No. 2,579,371, discloses a semiconductor to be cooled clamped between two evaporation exchangers containing internal cooling fins in a hollow interior. An electrically non-conductive fluid partly fills the interiors, which are sealed by insulators and pressure spreader plates. The heat conducted from the semiconductor evaporates the fluid which passes through flexible tubes to a condenser and is cooled by air convection. The condensate passes through a return tube back to the exchangers. To ensure a symmetrical thermal flux on the component, the exchangers share a common condenser. The Examiner's attention is directed to Figures 1 and 2, as well as the English Language Abstract.

Japanese Patent Number 54-154277 provides a pair of heat sinks attached to a print circuit to be cooled. At least one of the heat sinks appear to comprise a heat pipe. The Examiner's attention is directed to Figures 1-4, and the English Abstract.

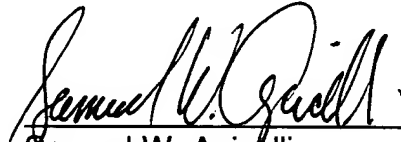
Soviet Union Patent Number 407,160 provides a tube comprising a body of rectangular cross-section with capillary-porous material on the inside. A wide range of working temperatures is provided by the inclusion of conical recesses that are made on opposite sides of the body and are joined together at their apexes, e.g., by welding. When heat is brought to an evaporating zone, the fluid evaporates from capillary-porous material and the vapour goes along a vapour channel into a condensation zone from which the heat is removed. The vapour condenses, settles in the form of condensate, and then returns via a transport zone to the evaporating zone. Significantly, the conical recesses do not define through bores. The Examiner's attention is directed to Figures 1 and 2, as well as the English Abstract.

Soviet Union Patent Number 987,357 provides a heat transfer tube that incorporates evaporating and condensing zones formed from a capillary porous structure with fins. The condensing zone includes a layer of absorbent material to remove non-condensable gases from the recirculating heat transfer fluid. The unit comprises evaporating and condensing zones that are interconnected by a vapour duct with apertures. The non-condensable gases are drawn by the flow of heat transfer fluid vapour through channels over the layer of porous absorbent material on the support, thereby keeping the evaporating zone virtually free from non-condensable gases. The Examiner's attention is directed to Figures 1 and 2, as well as the English Abstract.

The claimed invention is patentable over the enclosed references. No representations are made regarding the references other than those set forth above.

Respectfully submitted,

Date: 10/18/01

  
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